



NAVAL ELECTRONICS APPLICATION TRAINER/NAVAL ELECTRONICS APPLICATION DEMO TRAINER, DEVICES 6B17/6B17A SERIES

TRAINING CATEGORY:

BASIC SCIENCE (Electronics)

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 6B17 and 6B17A are unclassified.

INTENDED USE:

The devices shall be used for classroom training at any school or activity teaching basic or advanced electronics. They shall provide skill practice in the use of test equipment and in trouble shooting, and to test student proficiency.

Device 6B17 is intended for demonstration purposes and laboratory experiments by one or two students.

Device 6B17A is used for demonstration purposes before an entire class.

FUNCTIONAL DESCRIPTION:

Devices 6B17 and 6B17A are alike except that the latter provides larger training boards.

Each device consists of display panels, each of which schematically depicts one of the following basic electronic circuits: simple resistance, complex resistance, capacitance-inductance, RC time constant, series L-C-R, parallel L-C-R, series resonance, and parallel resonance.

All switches, jacks, test points, and circuit components are identified in each schematic. Each panel is mounted on a chassis which houses the electrical components that operate the display panels. Test equipment and meters may be inserted into the various circuits by using standard plug-in test leads.

Realistic presentations and situations can be developed on these training boards, and these situations can be tailored to introduce either simple or advanced circuitry. Components in the circuitry may also be changed to introduce planned malfunctions.

Device 6B17A is intended only for classroom demonstration by the instructor. Device 6B17 is intended for more intensive training of only two (2) trainees at a time.

After being checked out in standard safety precautions and procedures and in the use of the test equipment, students are allowed access to the components in Device 6B17 and, under supervision, make and perform various experiments and make measurements and tests as they would with operational equipment.

The physical layout of the devices provides easy accessibility to the components and also permits bench setups. Multiple test points facilitate connection of test equipment and minimize the physical labor aspects of the training, thus increasing the efficiency of the training cycle.

NAVPERS 93497, Trainee's Guide for Naval Electronics Application Trainer provides laboratory experiment job sheets giving objectives and safety precautions, and provides a record for results received from the experiments. It also contains diagrams showing the locations of components in the training boards.

PHYSICAL INFORMATION:

Device 6B17: Each panel is 17" x 13" x 4" with removable bottom plates, mounted on a 20" x 15" x 6" chassis. Total weight (packed) is 75 lbs. Shipping size is 9 cubic feet.

Device 6B17A: Each panel is 45" x 38" x 8" with removable bottom plates, mounted on a 45" x 38" x 8" chassis.

EQUIPMENT REQUIRED (NOT SUPPLIED):

1. One (1) Simpson 260 Multimeter, AN/PSM-4
2. Two (2) RCA 77E VTVM, AN/USM-34
3. One (1) EICO 377 Audio Signal Generator, GS-3820/U
4. Two (2) Trainee's Guide for NEAT, NAVPERS 93497
5. Standard plug-in test leads

POWER REQUIREMENTS:

117 VAC, 60 Hz, for integral power supply.

PUBLICATIONS FURNISHED:

Maintenance Handbook with Parts List for Device 6B17 and 6B17A, NAVSO P-2997 (U).

REFERENCE PUBLICATIONS (NOT SUPPLIED):

1. NAVSHIPS 0967-000-0120, Electronics Installation and Maintenance Book (Electronic circuits, test methods and practices)
2. NAVPERS 934001, Fundamentals of Electronics, Volume 1
3. NAVPERS 10084, Introduction to Electronics
4. NAVPERS 10086A, Basic Electricity
5. NAVPERS 10087A, Basic Electronics
6. NAVPERS 10188B, Electronics Technician 3

PERSONNEL:

Instructors: One (1) qualified to teach basic and advanced electronics. In a situation where trainees operate 6B17, one (1) instructor can teach on approximately twelve (12) devices simultaneously.

Operators: Instructor or trainee operated.

Trainees: Two (2) trainees (Device 6B17)
 Class of twenty (20) (Device 6B17A)

Maintenance: One (1) electronic technician (on call) per twelve (12) devices.

CONTRACT IDENTIFICATION:

(1) Manufactured by Schaevits Engineering, Pennsauken, NJ under NAVTRASYSCEN Contract No. N140-(61339)-78793B.

Devices	6B17/1	6B17/5
	6B17/2	6B17/6
	6B17/3	6B17/7
	6B17/4	6B17/8

(2) Manufactured by Schaevits MCD, Phila., PA under NAVTRASYSCEN Contract No. N61339-66-C-0140.

Devices	6B17A/1	6B17A/5
	6B17A/2	6B17A/6
	6B17A/3	6B17A/7
	6B17A/4	6B17A/8

(3) Manufactured by RMS Technology Inc., Hampton, VA under NAVTRASYSCEN Contract No. N61339-77-C-0182.

Devices	6B17/2B	6B17/9
	6B17/5A	

<u>SEC CLASS</u>	<u>PART NUMBER</u>	<u>NOMENCLATURE</u>	<u>LOCAL STOCK NUMBER</u>
U	6B17/1	NEAT, Basic Resistance, Panel 1	6910-LL-C00-7186
U	6B17/2	NEAT, Complex Resistance, Panel 2	6910-LL-C00-7187
U	6B17/2B	NEAT, Complex Resistance, Panel 2	6910-LL-C00-4937
U	6B17/3	NEAT, Capacitance - Inductance, Panel 3	6910-LL-C00-7188
U	6B17/4	NEAT, RC Time Constant, Panel 4	6910-LL-C00-7189
U	6B17/5	NEAT, Series LCR, Panel 5	6910-LL-C00-7190
U	6B17/5A	NEAT, Series LCR, Panel 5	6910-LL-C00-4938
U	6B17/6	NEAT, Series Resonance, Panel 6	6910-LL-C00-7191
U	6B17/7	NEAT, Parallel LCR, Panel 7	6910-LL-C00-7192
U	6B17/8	NEAT, Parallel Resonance, Panel 8	6910-LL-C00-7193
U	6B17/9	NEAT, Power Transformer Panel	6910-LL-C00-3763
U	6B17A/1	NEAT, Basic Resistance, Panel 1 Instructor Dem	6910-LL-C00-7194
U	6B17A/2	NEAT, Complex Resistance, Panel 2, Instructor Dem	6910-LL-C00-7195
U	6B17A/3	NEAT, Capacitance-Inductance, Panel 3, Instructor Dem	6910-LL-C00-7196
U	6B17A/4	NEAT, RC Time Constant, Panel 4, Instructor Dem	6910-LL-C00-7197
U	6B17A/5	NEAT, Series LCR, Panel 5, Instructor Dem	6910-LL-C00-7198
U	6B17A/6	NEAT, Series Resonance, Panel 6, Instructor Dem	6910-LL-C00-7199
U	6B17A/7	NEAT, Parallel LCR, Panel 7, Instructor Dem	6910-LL-C00-7200
U	6B17A/8	NEAT, Parallel Resonance, Panel 8, Instructor Dem	6910-LL-C00-7201